Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (canceled)

2. (currently amended) The wastewater source control system of claim [[1]] 36 wherein the hydrologic sensor comprises a flow sensor providing the output signal in response to the flow sensor measuring a greater than normal flow in the sewer main.

3. (currently amended) The wastewater source control system of claim 2 wherein the sewer main extends through a manhole and the flow sensor is located in the sewer main near the manhole.

4. (currently amended) The wastewater source control system of claim [[1]] 36 wherein the hydrologic sensor comprises a flow level sensor providing the output signal in response to the flow level sensor detecting a higher than normal level of flow in the sewer main.

5. (currently amended) The wastewater source control system of claim [[1]] 36 wherein the hydrologic sensor comprises a rainfall sensor providing the output signal in response to the rainfall sensor detecting an amount of rain likely to lead to a greater than normal flow in the sewer main.

6. (currently amended) The wastewater source control system of claim [[1]] 36 further comprising:

a transmitter electrically connected to the hydrologic sensor; and

a receiver electrically connected to the actuator and in electrical communications with the transmitter.

7. (currently amended) The wastewater source control system of claim 3 further comprising a transmitter disposed in the manhole and electrically connected to the hydrologic sensor.

8. (currently amended) The wastewater source control system of claim 3 further comprising a service box near a downstream end of the sewer service line, and the flow control device is disposed in the service box.

9. (currently amended) The wastewater source control system of claim 8 further comprising a receiver disposed in the service box, the receiver being electrically connected to the actuator and in electrical communications with the transmitter.

Claim 10 (canceled)

11. (currently amended) The wastewater source control system of claim [[10]] 38 wherein the detention tank and flow control device are disposed [[near a]] closer to the downstream end of the sewer service line than the upstream end.

12. (currently amended) The wastewater source control system of claim [[10]] 38 wherein the detention tank and flow control device are disposed near an upstream end of the sewer service line.

13. (currently amended) The wastewater source control system of claim [[10]] 38 wherein the detention tank and flow control device are disposed near an upstream end of the sewer service line and inside [[the]] a building.

14. (currently amended) The wastewater source control system of claim [[10]] 38 further comprising a sump pump disposed in the detention tank.

15. (currently amended) The wastewater source control system of claim 14 wherein the detention tank, the sump pump and flow control device are disposed [[near]] closer to a downstream end of the sewer service line than an upstream end.

16. (currently amended) The wastewater source control system of claim 14 wherein the detention tank, the sump pump and flow control device are disposed near an upstream end of the sewer service line.

17. (currently amended) The wastewater source control system of claim 14 wherein the detention tank, the sump pump and flow control device are disposed near an upstream end of the sewer service line and inside the building.

Claims 18-23 (canceled)

24. (currently amended) A method of claim [[23]] 42 further comprising:

producing a first signal ~~with a flow sensor~~ in response to a flow sensor detecting the first flow; and

transmitting the first signal to a flow control device disposed in the sewer service line;

causing the flow control device to change state in response to the first [[flow]] signal to block the wastewater in the sewer service line from flowing into the sewer main.

25. (currently amended) A method of claim [[22]] 24 further comprising:

producing a second signal ~~with the flow sensor~~ in response to the flow sensor detecting the second flow; and

transmitting the second signal to the flow control device; and

causing the flow control device to change state in response to the second [[flow]] signal to unblock the sewer service line and release the wastewater accumulated in the sewer service line into the sewer main.

Claims 26-27 (canceled)

28. (currently amended) A method of claim [[27]] 43 further comprising:

producing a first signal ~~with a rainfall sensor~~ in response to a rainfall sensor detecting the rainfall; and

transmitting the first signal to a flow control device disposed in the sewer service line;

causing the flow control device to change state in response to the first [[flow]] signal to block the wastewater in the sewer service line from flowing into the sewer main.

29. (currently amended) A method of claim 28 further comprising:

producing a second signal; and

transmitting the second signal to the flow control device; and

causing the flow control device to change state in response to the second [[flow]] signal to unblock the sewer service line and release [[the]] wastewater accumulated in the sewer service line into the sewer main.

30. (currently amended) [[A]] The method of claim 42 further comprising, after blocking the sewer service line, ~~reducing wastewater in a sewer main receiving the wastewater from a sewer service line connected to a drain pipe in a building, the method comprising:~~

~~detecting a first flow in the sewer main being greater than a normal flow; and~~

~~storing~~ accumulating the wastewater ~~from the sewer main and into~~ in a detention tank in fluid communication with the sewer service line ~~response to detecting the first flow~~.

31. (currently amended) A method of claim 30 further comprising~~:~~

~~detecting a second flow in the sewer main being less than the greater than normal flow; and~~

releasing the wastewater [[from]] accumulated in the detention tank and into the sewer main in response to detecting the second flow.

32. (original) A method of claim 31 further comprising pumping the wastewater from the detention tank and into the sewer main in response to detecting the second flow.

33. (currently amended) A method of claim 32 further comprising:

producing a first signal ~~with a flow sensor~~ in response to a first sensor detecting the first flow; and

transmitting the first signal to a flow control device disposed in the sewer service line;

causing the flow control device to change state in response to the first [[flow]] signal to ~~divert~~ accumulate wastewater ~~from the sewer main and into~~ in the detention tank.

34. (currently amended) A method of claim 33 further comprising:

producing a second signal ~~with the flow sensor~~ in response to a second flow sensor detecting the second flow; and

transmitting the second signal to the flow control device; and

causing the flow control device to change state in response to the second [[flow]] signal to release the wastewater accumulated in the ~~sewer service line and cease collecting wastewater in the~~ detention tank.

35. (currently amended) A method of claim 34 further comprising:

transmitting the second signal to a sump pump disposed in the detention tank to operate and

operating the sump pump to pump wastewater from the detention tank into the sewer service line.

36. (new) A wastewater source control system for reducing entry of sanitary waste from a building drain into a sewer main in response to a high flow in the sewer main, the wastewater control system comprising:

a sewer service line having an upstream end connected to the building drain and a downstream end connected to the sewer main, the sewer service line conducting a flow of wastewater from the building drain to the sewer main;

a hydrologic sensor producing

a first signal in response to detecting a high flow in the sewer main, and

a second signal in response to detecting a lesser flow in the sewer main after the high flow;

a flow control device connected in the sewer service line; and

an actuator in electrical communication with the sensor and connected to the flow control device, the actuator operating the flow control device to

block the sewer service line in response to the first signal and collect wastewater in the sewer service line, thereby reducing entry of sanitary waste from the building drain into the sewer main, and

unblock the sewer service line in response to the second signal and allow wastewater collected in the sewer service line to then flow into the sewer main.

37. (new) The wastewater source control system of claim 36 further comprising a service box having an upper end accessible from a grade surface and a lower end below grade adjacent to the sewer service line, the service box providing access to the flow control device and the actuator.

38. (new) A wastewater source control system for reducing entry of sanitary waste from a building drain into a sewer main in response to a high flow in the sewer main, the wastewater control system comprising:

a sewer service line having an upstream end connected to the building drain and a downstream end connected to the sewer main, the sewer service line conducting a flow of wastewater from the building drain to the sewer main;

a detention tank in fluid communication with the sewer service line;

a hydrologic sensor producing

a first signal in response to detecting a high flow in the sewer main, and

a second signal in response to detecting a lesser flow in the sewer main after the high flow;

a flow control device connected in the sewer service line; and

an actuator in electrical communication with the sensor and connected to the flow control device, the actuator operating the flow control device to

block the sewer service line in response to the first signal and collect wastewater in the sewer service line, thereby reducing entry of sanitary waste from the building drain into the sewer main, and

unblock the sewer service line in response to the second signal and allow wastewater collected in the detention tank to then flow into the sewer main.

39. (new) A wastewater source control system for reducing entry of sanitary waste from a building drains into a sewer main in response to a high flow in the sewer main, the wastewater control system comprising:

a first plurality of sewer service lines, each of the first plurality of sewer service lines having an upstream end connected to a respective building drain and a downstream end connected to the sewer main, each of the first plurality of sewer service lines conducting a flow of wastewater from the respective building drain to the sewer main;

a first hydrologic sensor producing

a first signal in response to detecting a high flow in the sewer main, and

a second signal in response to detecting a lesser flow in the sewer main after the high flow;

a first plurality of flow control devices, each of the first plurality of flow control devices connected in a different one of the first plurality of sewer service lines; and

a first plurality of actuators, each of the first plurality of actuators being in electrical communication with the first hydrologic sensor and connected to a different one of the first plurality of flow control devices, each of the first plurality of actuators operating a respective flow control device to

block a respective sewer service line in response to the first signal and collect wastewater in the respective sewer service line, thereby reducing entry of sanitary waste from the building drain into the sewer main, and

unblock the respective sewer service line in response to the second signal and allow collected wastewater to then flow into the sewer main.

40. (new) The wastewater source control system of claim 39 further comprising a central wastewater management facility in electrical communication with the first hydrologic sensor and the first plurality of actuators, the central management facility operating the first plurality of actuators in response receiving the first signal and the second signal.

41. (new) The wastewater source control system of claim 40 further comprising:

a second plurality of sewer service lines, each of the second plurality of sewer service lines having an upstream end connected to a respective building drain and a downstream end connected to the sewer main, each of the second plurality of sewer service lines conducting a flow of wastewater from the respective building drain to the sewer main;

a second hydrologic sensor in electrical communication with the central wastewater management facility and producing

a third signal in response to detecting a high flow in the sewer main, and

a fourth signal in response to detecting a lesser flow in the sewer main after the high flow;

a second plurality of flow control devices, each of the second plurality of flow control devices connected in a different one of the second plurality of sewer service lines; and

a second plurality of actuators in electrical communication with the central wastewater management facility, each of the second plurality of actuators being connected to a different one of the second plurality of flow control devices, the central wastewater management facility operating one of the second plurality of flow control devices to

block a respective sewer service line in response to the third signal and collect wastewater in the respective sewer service line, thereby reducing entry of sanitary waste from a building drain into the sewer main, and

unblock the respective sewer service line in response to the fourth signal and allow collected wastewater to then flow into the sewer main.

42. (new) A method of reducing entry of sanitary waste from a building drain wastewater source into a sewer main in response to a high flow in the sewer main, the method comprising:

providing a sewer service line having an upstream end connected to the building drain and a downstream end connected to the sewer main, the sewer service line conducting wastewater from the building drain to the sewer main;

detecting a first flow in the sewer main resulting from a high flow in the sewer main;

blocking the sewer service line in response to detecting the first flow;

accumulating the wastewater in the sewer service line to prevent its flow into the sewer main, thereby reducing entry of sanitary waste from the building drain into the sewer main;

detecting a second flow in the sewer main after the high flow; and

unblocking the sewer service line in response to detecting the second flow to release wastewater accumulated in the sewer service line into the sewer main.

43. (new) A method of reducing entry of sanitary waste from a building drain into a sewer main in response to a high flow in the sewer main, the method comprising:

providing a sewer service line having an upstream end connected to the building drain and a downstream end connected to the sewer main, the sewer service line conducting wastewater from the building drain to the sewer main;

detecting a rainfall with a potential of resulting in a high flow in the sewer main;

blocking the sewer service line in response to detecting the rainfall;

accumulating the wastewater in the sewer service line to prevent its flow into the sewer main, thereby reducing entry of sanitary waste from the building drain into the sewer main; and

thereafter, unblocking the sewer service line to release wastewater accumulated in the sewer service line into the sewer main.